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PAPERS ON COLORIMETRY from THE NATIONAL BUREAU OF STANDARDS

I. Official Publications Issued by the Government Printing Office. (Listed in Chronological Order.)

These papers may be consulted at any Government Depository Library, of which there is at least one in each congressional district. A complete list of these libraries is contained in Bureau of Standards Circular No. 24, obtainable from the Publication Section, Bureau of Standards, Washington, D. C.

Provided they are not out of print, these papers may be purchased of the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices listed. If the price is enclosed in parentheses, the paper is out of print and not available.

The significance of the letters preceding publication numbers is as follows:-

S means "Scientific Paper of the Bureau of Standards".

T means "Technologic Paper of the Bureau of Standards".

C means "Circular of the Bureau of Standards".

M means "Miscellaneous Publication of the Bureau of Standards".

An asterisk (*) before the title indicates that the major responsibility for the paper lies with some section of the Bureau other than the Colorimetry Section, but that the latter section has afforded considerable advice or assistance in the work.

Two asterisks (**) before the title indicates that the paper emanates from some section of the Bureau other than the Colorimetry Section, but has a bearing on colorimetry or close relation to it. However, numerous papers which might be so classed (on spectroradiometry, photometry, etc.) are not listed here. For complete list, consult B. S. Circular No. 24, and supplements to it.

Three asterisks (***) before the title indicates that the paper antedates the formal organization of the Colorimetry Section at the Bureau.

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Title and Author	Date of issue	**	Price
*** TALBOT'S LAW AS APPLIED TO THE ROTATING SECTORED DISK Edward P. Hyde	March 1, 1906	s 26	15¢
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*** PURITY AND INTENSITY OF MONOCHRO-MATIC LIGHT SOURCES P. G. Nutting	Sept. 1, 1907	S 44	(5¢)
*** THE LUMINOUS EQUIVALENT OF RADIA- TION P. G. Nutting	Sept. 3, 1908	S 103	(15¢)
*** A METHOD FOR CONSTRUCTING THE NAT- URAL SCALE OF PURE COLOR P. G. Nutting	Apr. 27, 1909	S 118	(5¢)
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*** LUMINOSITY AND TEMPERATURE P. G. Nutting	July, 1909	S 133	(5¢)
*** WHITE LIGHT FROM THE MERCURY ARC AND ITS COMPLEMENTARY Herbert E. Ives	Aug. 1, 1909	S 128	(5¢)
*** THE VISIBILITY OF RADIATION. A RECALCULATION OF KÖNIG'S DATA P. G. Nutting	Oct. 1, 1910	S 154	(5¢)
*** A PHOTOMETRIC ATTACHMENT FOR SPECTROSCOPES P. G. Nutting	Oct. 1, 1910	S 155	(5¢)
*** THE DETERMINATION OF THE OPTICAL PROPERTIES OF MATERIALS	March 1 1911	C 28	(5¢)
*** A NEW PRECISION COLORIMETER P. G. Nutting	July 25, 1912		(5¢)

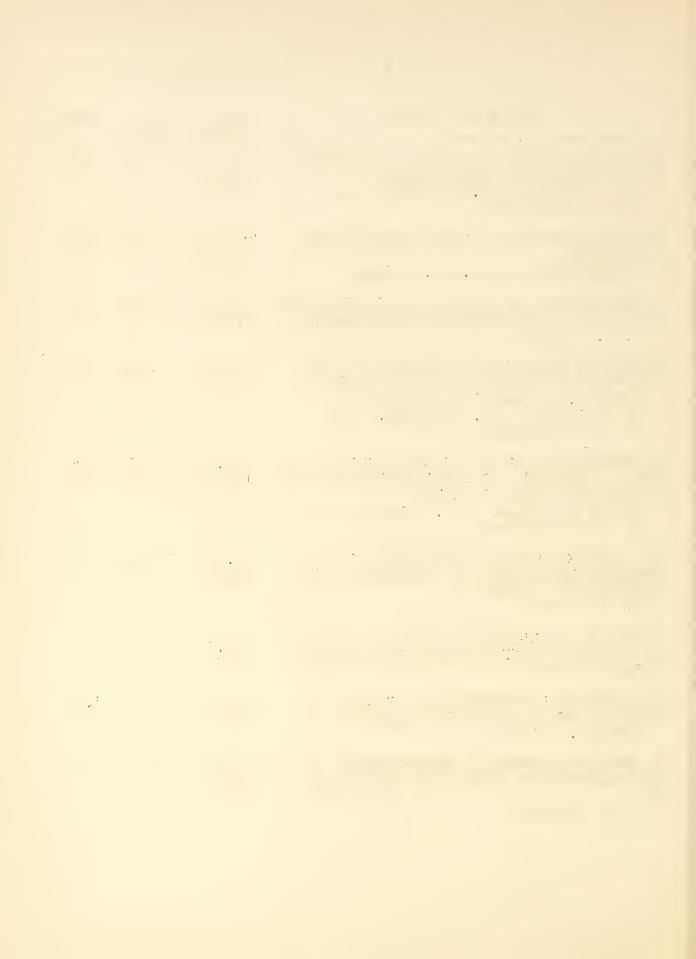
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Title and Author	Date of Issue	Paper No.	Price
SPECIFICATION OF THE TRANSPARENCY OF PAPER AND TRACING CLOTH	May 17, 1917	C 63	5¢
** AN "AVERAGE EYE" FOR HETEROCHRO- MATIC PHOTOMETRY, AND COMPARISON OF A FLICKER AND AN EQUALITY-OF-BRIGHTNESS PHOTOMETER E. C. Crittenden and F. K. Richtmyer	May 26, 1917	S 299	5¢
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** GLASSES FOR PROTECTING THE EYES FROM INJURIOUS RADIATIONS W. W. Coblentz and W. B. Emerson.	Feb.28, 1319 (GráEdn.)	T 93	10¢
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** SPECTRORADIOMETRIC INVESTIGATION OF THE TRANSMISSION OF VARIOUS SUBSTANCES, II W. W. Coblentz	Aug.29, 1921	S 418	5¢



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THE SPECTRAL TRANSMISSIVE PROPERTIES OF DYES: I. SEVEN PERMITTED FOOD DYES, IN THE VISIBLE, ULTRA-VIOLET, AND NEAR INFRA-RED K.S. Gibson, H. J. McNicholas, E.P.T. Tyndall, and M. K. Frehafer, with the cooperation of W. E. Mathewson, Bureau of Chemistry	June 15, 1922	S 440	15¢
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* MEASURE OF THE COLOR CHARACTERISTICS OF WHITE PAPER R. E. Lofton	Nov.17, 1923	T 244	5 ¢
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An asterisk (*) before the title indicates that the author was not a regular member of the Colorimetry Section, but that he used its laboratory facilities or obtained considerable advice or assistance from the section in carrying on the work reported in the paper.

An asterisk (*) after the title indicates an abstract of a paper presented before some scientific society, containing usually information not published elsewhere.

Two asterisks (**) after the title indicates a committee report in the preparation of which some member or members of the section cooperated.

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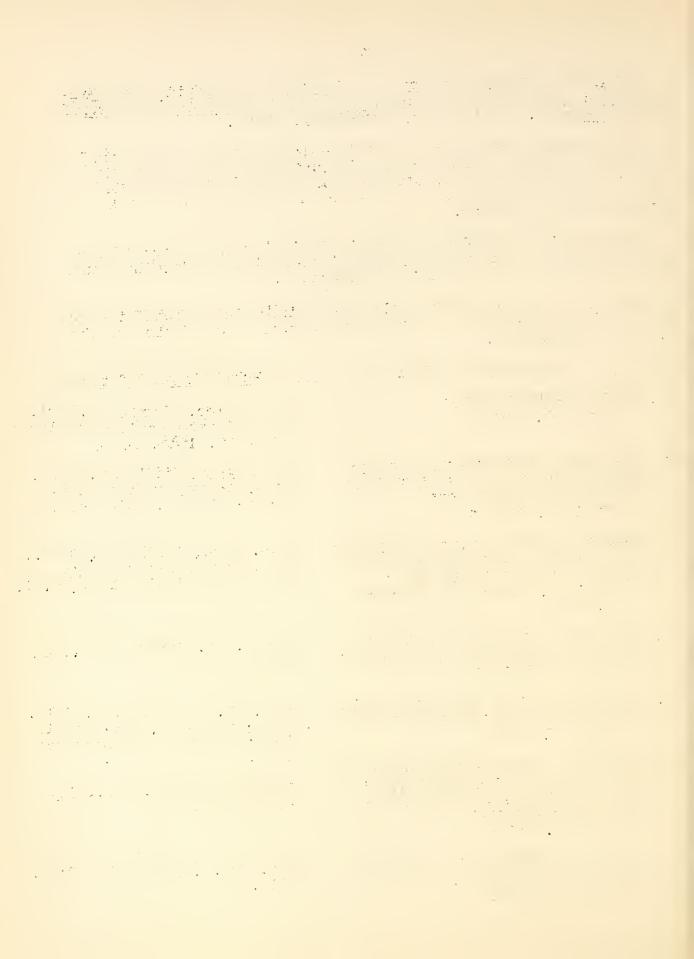
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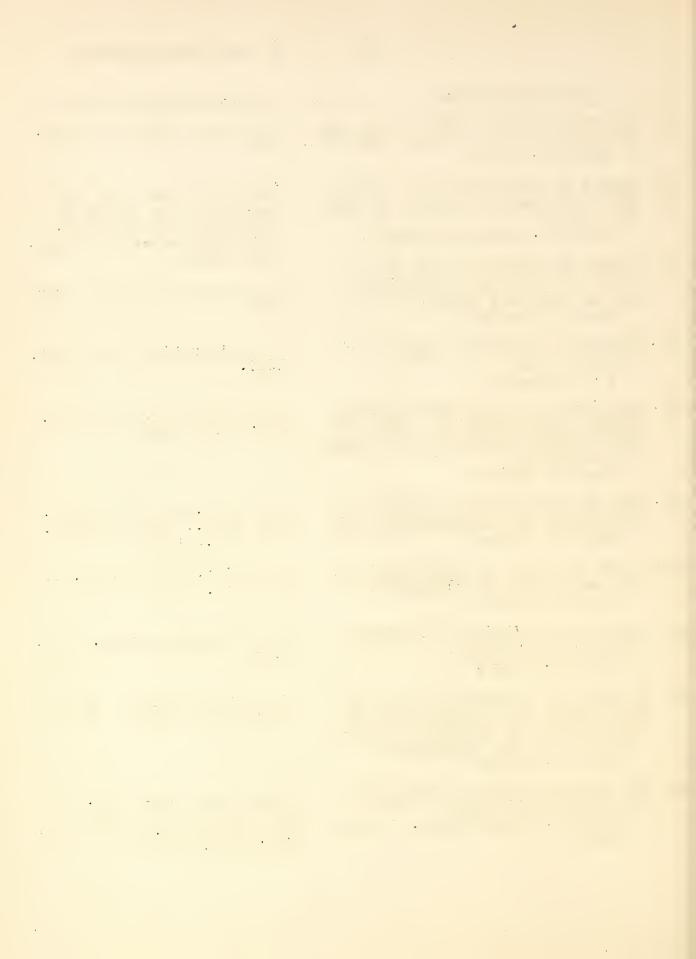
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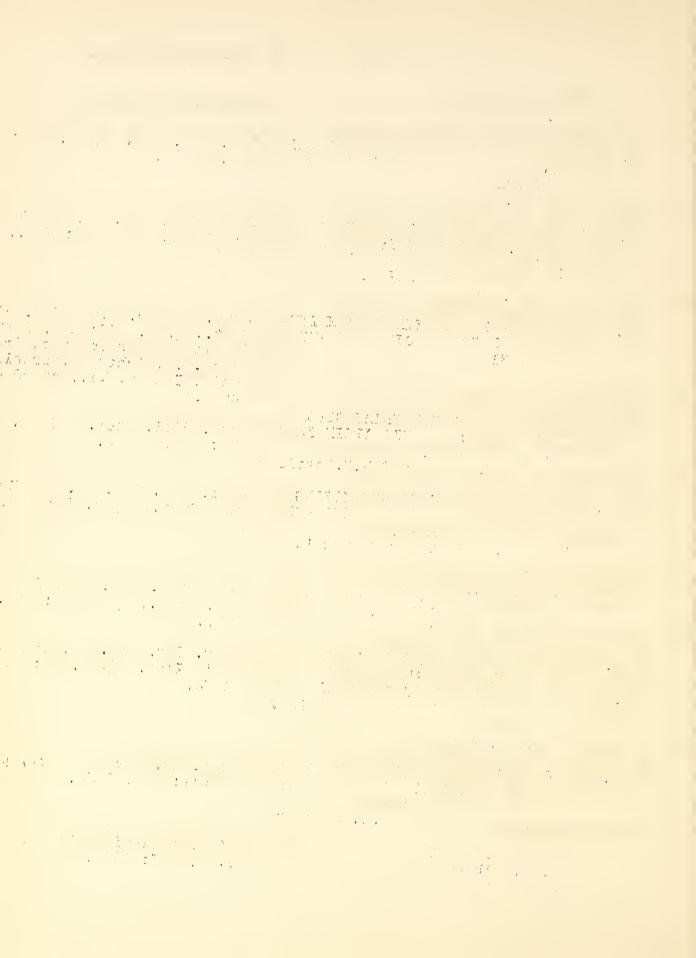
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- Jour. Opt. Soc. Am. and Rev. Soi. Inst., <u>13</u>, pp. 133-155; Aug., 1926.
- 70. THE FRODUCTION OF RADIANT ENER-GY OF UNIFORM INTENSITY OVER THE VISIBLE SPECTRUM* K. S. Gibson
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 305; Sept. 1926.
- 71. AN EXPERIMENT BEARING ON THE ADOPTION OF A STANDARD NEUTRAL STIMULUS IN COLORIMETRY; THE CHOICE AS BETWEEN "SUN" AND "EQUAL ENERGY" * Irwin G. Friest
- Jour, Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 306; Sept., 1926.
- 72. THE MINIMUM PERCEPTIBLE COLORI-METRIC PURITY AS A FUNCTION OF DOMINANT WAVE LENGTH WITH SUN-LIGHT AS NEUTRAL STANDARD* Irwin G.Priest and F.G.Brickwedde
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>13</u>, pp. 306-307; Sept., 1926.

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- 73. BLUE SKY AND WHITE SNOW*
 Irwin G. Priest
- 74. *THE COLOR TEMPERATURE OF GAS-FILLED LAMPS AS A FUNCTION OF TIME IN SERVICE* H. E. Howe
- 75. SPECTRAL FILTERS K. S. Gibson
- 76. *THE ABSORPTION SPECTRA OF BENZENEAZOBENZENE Wallace R. Brode
- 77. *THE DISSOCIATION OF POTAS—
 SIUM IODIDE AND THE ABSORP—
 TION SPECTRA OF IODINE AND
 POTASSIUM IODIDE
 Wallace R. Brode

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>13</u>, p. 308; Sept., 1926.

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BUREAU OF STANDARDS Colorimetry Section

Publications During the Fiscal Year 1927 (July 1, 1926 - June 30, 1927)

I. Official Publication by the Government Printing Office:

Title and Author	Date of Issue	Paper No.	Price
THE LOVIBOND COLOR SYSTEM. I. A SPECTRO-PHOTOMETRIC AMALYSIS OF THE LOVIBORD GLASSES K. S. Gibson, F. K. Harris, and Tryin G. Priest	Feb. 17, 1927	S 547	15¢

II. Papers Emanating from the Colorimetry Section, Bureau of Standards, Published Elsewhere than in the Official Publications of the Bureau.

An asterisk (*) before the title indicates that the work is only in part the product of the Colorimetry Laboratory. It usually means that some use was made of apparatus and facilities afforded by the section, or that the author obtained considerable advice and assistance from members of the section.

An asterisk (*) after the title indicates an abstract of a paper presented before some scientific society.

Two asterisks (**) after the title indicate a committee report in the preparation of which some members of the section cooperated.

Titl	e and author	Publication Reference
67.	REPORT OF THE OPTICAL SOCIETY OF AMERIC. COMMITTEE ON COLOR TERMINOLOGY QUESTIONNAIRE**	Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>13</u> , p. 43; July, 1926.
68.	THE COMPUTATION OF COLORIDET- ITC PURITY, II Irvin G. Priest	Jour. Opt. Soc. Am. and Rev. Sci. Inst., 15, p. 123; Aug., 1926.
69.	THE COMPUTATION OF CCLORABET- RIC LURITY Deane B. Judd	Jour. Opt. Sec. Am. and Rev. Sci. Inst., <u>13</u> , p. 133; Adg., 1926.
70.	THE PRODUCTION OF RADIANT EN- ERGY OF UNIFORM INTENSITY OVER THE VISIBLE SPECTRUM* K. S. Gibson	Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>13</u> , p. 305; Sept., 1926.



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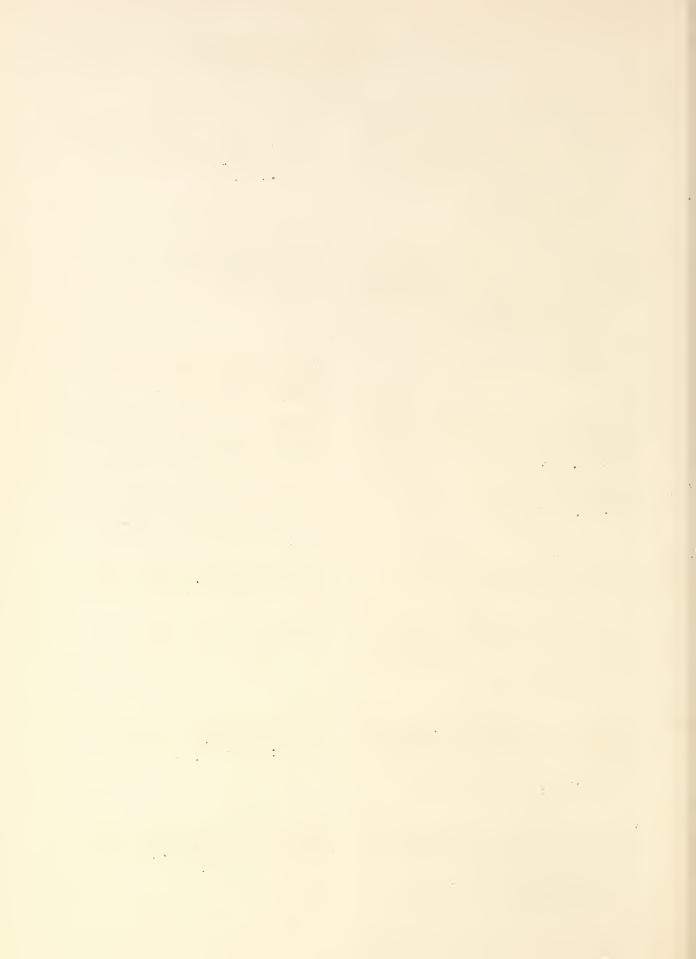
- 71. AN EMPORIMENT BEARING ON THE ADOPTION OF A STANDARD MEUTRAL STIMULUS IN COLORIMETRY; THE CHOICE AS BETWEEN "SUN" AND "EQUAL OFERGY"*

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- Jour. Opt. Scc. Am. and Rev. Sci. Inst., 13, 2. 306; Sept., 1926.
- 72. THE MINIMUM PERCEPTIBLE COLOR-IMETRIC PURITY AS A FUNCTION OF DOMINANT WAVE LENGTH WITH SUNLIGHT AS MEUTRAL STANDARD*
 ITWIN G. Priest and F. G. Brickwedde
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 306; Sept., 1926.

- 73. BLUE SKY AND WHITE SHOW* Irwin G. Priest
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 308; Sept., 1926.
- 74. THE COLOR TEITPERATURE OF GAS-FILLED LAMPS AS A FUNCTION OF TILE IN SERVICE* H. E. Howe
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 304; Sept., 1926.

75. SPECTRAL FILTERS
K. S. Gibson

- Jour. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 267; Sept., 1926.
- 76. * THE ABSORPTION SPECTRA OF BENZENDAZOBENZENE Wallace R. Brode
- Jour. Am. Chem. Soc., 48, p. 1984; July, 1926.
- 77. * THE DISSOCIATION OF POTASSIUM IODIDE AND THE ABSORPTION SPECTRA OF IODINE AND POTASSIUM IODIDE
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- Jour. Am. Chem. Soc., 48, p. 1877; July, 1926.
- 78. * OPTICALLY ACTIVE BYES. III.
 PHYSICAL PROPERTIES, DYEING
 REACTIONS AND MECHANISH OF
 DYEING
- Jour. im. Chem. Soc., 48, p. 2193; August, 1926.
- Wallace R. Brode with Roger Adams
- 79. * OPTICALLY ACTIVE DYES. IV. Jour. Am. Chem. Soc., 48, ASYMMETRIC DYES FROM META- p. 2202; August, 1926.
 - Wallace R. Brode with Roger Adams



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* REPRODUCIBLE LIQUID FILTERS
FOR THE PRODUCTION OF "WHITE
LIGHT"*
R. Davis and K. S. Gibson

Jour. Opt. Soc. Am. and Rev. Sci. Inst., 14, p. 135; Feb. 1927.

81. A PROPOSED HETHOD FOR THE HEAS-URELENT OF THE RELATIVE VIS-IBILITY FUNCTION* K. S. Gibson

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>14</u>, p. 135; Feb. 1927.

82. APPARATUS FOR THE DETERMINATION Jour.

OF THE VISIBILITY OF ENERGY AND Sci.

THE PUNDAMENTAL SCALES OF VISUAL 1927.

PSYCHOPHYSICS*

Jour. Opt. Soc. Am. and Rev. Sci. Inst., 14, p. 136; Feb., 1927.

Irwin G. Priest and K. S. Gibson

83. SENSIBILITY TO WAVELONGTH DIF-FERENCE AS A FUNCTION OF PURITY* E. P. T. Tyndall

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>14</u>, p. 137; Feb., 1927.

84. SENSIBILITY TO WAVELENGTH DIFFERENCE AND THE PRECISION OF
MEASUREMENT OF DOMINANT WAVELENGTH FOR YELLOW COLORS OF
HIGH SATURATION*

Irwin G. Priest and D. B.

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85. AN EXPERIMENT ON COLOR DIS-CRIMINATION UNDER COMMONPLACE CONDITIONS* Irwin G. Priest

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Jour. Opt. Soc. Am. and Rev. Sci. Inst., 14, p. 138; Feb., 1927.

86. ON THE USE OF THE INTEGRATING SPHERE IN REFLECTORETRY*

H. J. McNicholas

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>14</u>, p. 142; Feb., 1927.

87. *REPRODUCIBLE LIQUID FILTERS
FOR THE DETERMINATION OF THE
COLOR TEMPERATURES OF INCANDESCENT LAMPS*
R. Davis and K. S. Gibson

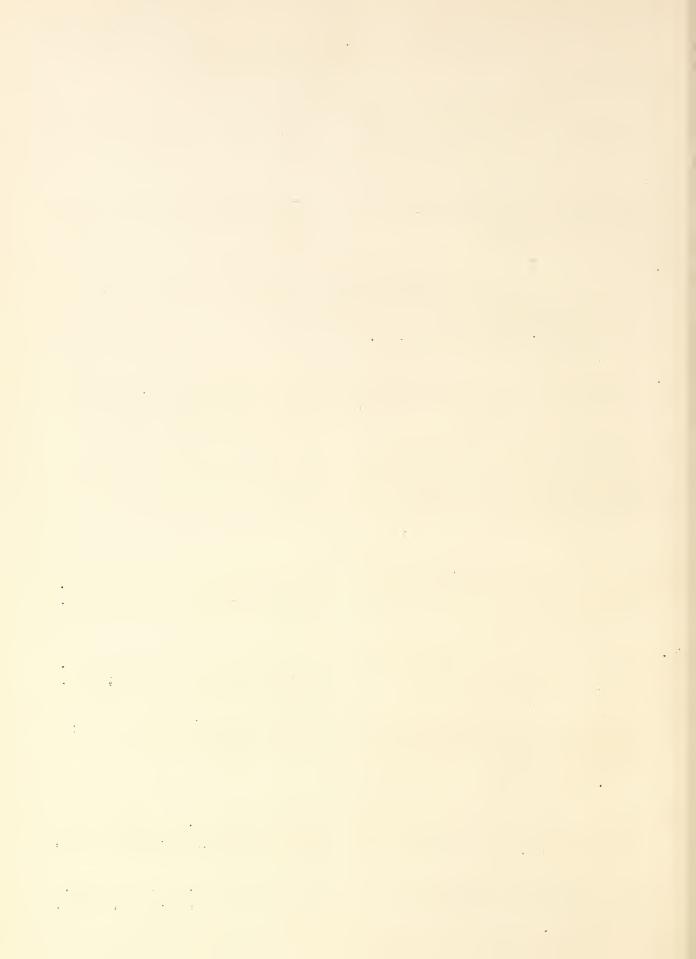
Phys. Rev. (2), 29, p. 916; June, 1927.

88. PURITY AND SATURATION; A SAT-URATION SCALE FOR YELLOW* Desne B. Judd Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>14</u>, p. 470; June, 1927.

89. THE EMPIRIC RELATION BETWEEN DOMINANT WAVE LENGTH AND PURITY*

Deane 3. Judd

Jour. Opt. Soc. im. and Rev. Sci. Inst., <u>14</u>, p. 475; June, 1927.



BUREAU OF STANDARDS Colorimetry Section

Publications During the Fiscal Year 1928 (July 1, 1927 - June 30, 1928)

I. Official Publications by the Government Printing Office.

Two asterisks (**) before the title indicates that the paper emanates from some section of the Bureau other than the Colorimetry Section, but has a bearing on colorimetry or close relation to it. However numerous papers which might be so classed (on spectroradiometry, photometry, etc.) are not listed here. For complete list, consult B. S. Circular No. 24, and supplements to it.

Ti t	tle and Author	Date of Issue	Paper No.	Price
**	COLOR IN THE SUGAR INDUSTRY H. H. Peters and F. P. Phelps	March 12, 1927	T 338	20 ¢
**	TRANSMISSIVE PROPERTIES OF EYE- PROTECTIVE GLASSES AND OTHER SUBSTANCES W. W. Coblentz and R. Stair	June 19, 1928	T 369	10 ¢

II. Papers Emanating from the Colorimetry Section, Bureau of Standards, Published Elsewhere than in the Official Publications of the Bureau.

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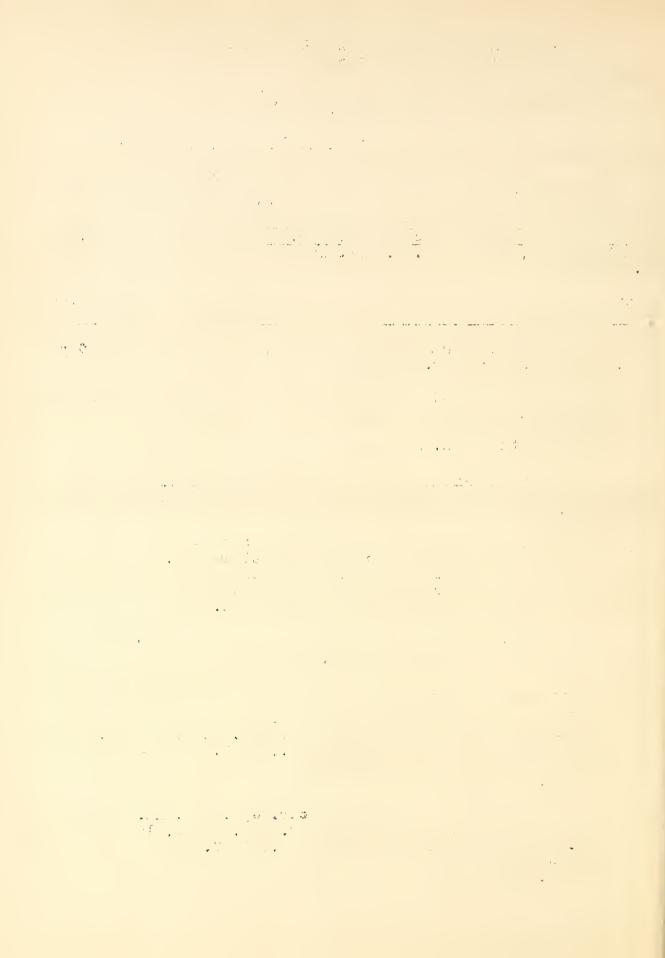
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- 90. CORRECTION OF A PREVALENT ERROR
 IN REGARD TO THE DATA ON PHOTOMETRIC SENSIBILITY AS A FUNCTION
 OF WAVE LENGTH AT LOW BRIGHTNESS
 Irwin G. Priest
- Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>15</u>, p. 82; Aug., 1927.
- 91. NOTE ON THE RELATIVE COMFORT IN READING BY ARTIFICIAL DAYLIGHT AND UNMODIFIED GAS-FILLED TUNG-STEN LAMPS

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>15</u>, p. 131, Sept., 1927.

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*A METHOD FOR MEASURING THE COLOR 92. OF TEXTILES William D. Appel

Am. Dyestuff Reporter, Jan. 23, 1928, p. 49.

A STUDY OF 129 LOVIBOND RED GLASSES 93. WITH RESPECT TO THE RELIABILITY OF THE IR NOWINAL GRADES Deane B. Juda, and Geraldine K. Valker

Oil and Fat Industries, 5, p. 16; Jan., 1928.

SATURATION OF COLORS DETERMINED 94. FROM THE VISUAL RESPONSE FUNCTIONS* Deane B. Judd

Jour. Opt. Sec. Am. and Rev. Sci. Inst., 16, p. 115; February, 1928.

SENSIBILITY TO COLOR CHANGE DETERMIN - Jour. Opt. Soc. Am. and 954 ED FROM THE VISUAL RESPONSE FUNC-TIONS: EXTENSION TO COMPLETE AND PARTIAL DICHROMASY* Deane B. Juda

Rev. Sci. Inst., 16, p. 115; Feb., 1928.

STANDARDIZING THE RED AND YELLOW 96. LOVIBOND CLASSES* Irwin G. Priest and K. S. Gibson

Jour. Opt. Soc. Am. and Rev. Sci. Inst., 16, p. 116; Feb., 1928.

37. PRELIMINARY DATA ON THE LEAST PER-CEPTILLE DIFFERENCE IN DOMINANT WAVE LENGTH BY THE METHOD OF RIGHT AND WRONG ANSWERS* Irwin G. Priest

Jour. Opt. Soc. Am. and Rev. Sci. Inst., 16, p. 117; Feb., 1928.

*COLOR TEMPERATURE CLASSIFICATION 98. OF NATURAL AND ARTIFICIAL ILLUM-INANTS Norman Macbeth

Trans. Ill. Eng. Soc., 23, p. 302; Mar., 1928.

99. TESTS OF COLOR SENSE OF A.O.C.S. MEMBERS AND DATA ON SENSIBILITY TO CHANGE IN LOVIBOND RED Irwin G. Priest

Oil and Fat Industries, 5, p. 63; Mar., 1928.

100. *FILTERS FOR THE REPRODUCTION OF SUNLIGHT AND THE DETERMINATION OF COLOR TEMPERATURE* Raymond Davis and K. S. Gibson

Jour. Opt. Soc. Am. and Rev. Sci. Inst., <u>16</u>, p. 332; May, 1928.

101. EQUIPMENT FOR ROUTINE SPECTRAL TRANS- Jour. Opt. Soc. Am. and MISSION AND REFLECTION MEASUREMENTS* Rev. Sci. Inst., 16, p. H. J. McNicholas

333; May, 1928.

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Title and Author

Publication Reference

- 102. *ARTIFICIAL SUNLIGHT FOR PHOTO-GRAPHIC SENSITOMETRY Raymond Davis and K. S. Gibson
- 103. STANDARDIZATION OF LOVIBOND GLASSES (MONTHLY REPORTS FROM COLORIMETRY SECTION TO PRESIDENT OF AMERICAN OIL CHEMISTS' SCCIETY)
- Trans. Soc. Motion Picture Engineers, <u>12</u>, p. 225; 1928.
- Oil and Fat Industries, 4, p. 433; Dec., 1927;
- 5, p. 27; January;
 - p. 58; Ferruary;
 - p. 92; March;
 - r. 114; April;
 - p. 152; May;
 - p. 184; June (there are many typegraphical errors in this report);
 - p. 220; July; p. 247; August;
 - p. 278; September, 1928,

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I. Official Publications by the Government Printing Office.

These papers may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices
noted.

	tle and Author	Date of Issue	Paper No.	Price
	ABSOLUTE METHODS IN REFLECTOMETRY H. J. McNicholas	July, 1928	RP3	10 ¢
**	TINTING STRENGTH OF PIGMENTS H. D. Bruce	August, 1928	RP7	10 ¢
	EQUIPMENT FOR ROUTINE SPECTRAL TRANSMISSION AND REFLECTION MEASUREMENTS H. J. McNicholas	November, 1928	RP30	20 ¢
	EFFECT OF TEMPERATURE CHANGE ON THE COLOR OF RED AND YELLOW LOV-IBOND GLASSES Deane B. Judd	November, 1928	RP31	5 ¢
	USE OF THE UNDER-WATER SPARK WITH THE HILGER SECTOR PHOTOMETER IN ULTRA-VIOLET SPECTROPHOTOMETRY H. J. McNicholas	December, 1928	RP33	5 ¢
	LEAST RETINAL ILLUMINATION BY SPECTRAL LIGHT REQUIRED TO EVOKE THE "BLUE ARCS OF THE RETINA" Deane B. Judd	February, 1929	RP43	5 ¢

** THE SPECTRAL ABSORPTION OF CERTAIN MONOAZO DYES

Wallace R. Brode

March, 1929

RP47

15 ¢

CALIBRATION OF SIXTY-FIVE 35-YEL-

LOW LOVIBOND GLASSES

Irwin G. Priest, Deane B. Judd, K. S. Gibson, and Geraldine K. Walker

April, 1929

RP58

10 ¢

II. Papers Published Elsewhere than in the Official Publications of the Bureau.

An asterisk (*) after the title indicates an abstract of a paper presented before some scientific society.

Two asterisks (**) after the title indicate a committee report in the preparation of which some members of the section cooperated.

Title and author

Publication Reference

104. AMERICAN STANDARD COLORS FOR TRAFFIC SIGNALS** (omitted from previous list) American Standards Association

A. S. A., 29 West Thirty-ninth street, New York, N. Y., Nov. 15, 1927; 25 ¢

105. THE UNIT OF PHOTOGRAPHIC IN-TENSITY** Report of the O.S.A. Committee on the Unit of Photographic Intensity, L. A. Jones, Chairman

Proc. 7th International Congress of Photography, London, July, 1928, pp. 152-161.

106. *ARTIFICIAL SUNLIGHT FOR PHOTO-GRAPHIC SENSITOMETRY Raymond Davis and K. S. Gibson

Proc. 7th International Congress of Photography, London, July, 1928, pp. 161-173.

107. SPECTRAL FILTERS K. S. Gibson

Int. Crit. Tab., 5, pp. 271-274; 1929.

108.**AN INTERLABORATORY COMPARISON OF COLORED PHOTOMETRIC FILTERS E. C. Crittenden and A. H. Taylor

Trans. Illum. Eng. Soc., 24, pp. 153-207; Feb., 1929.

109. RESOLUTIONS DEALING WITH THE PHO TO GRAPHIC UNIT OF INTENSITY PRESENTED AT THE INTERNATIONAL CONGRESS OF PHOTOGRAPHY* ** Report of the O.S.A. Committee on Standards of Photographic Intensity, L.A. Jones, Chairman

J. Opt. Soc. Am. and Rev. Sci. Inst., 18, pp. 162-163; March, 1929.

